

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Review of the Commission's Rules Regarding)	
The Pricing of Unbundled Network Elements)	WC Docket No. 03-173
And the Resale of Service by Incumbent Local)	
Exchange Carriers)	
)	

REPLY COMMENTS OF SBC COMMUNICATIONS INC.

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INTRODUCTION AND SUMMARY

There are two basic questions in this proceeding: should TELRIC be reformed; and, if so, how? There can be no serious dispute on the former question. As the Commission has recognized, the current version of TELRIC is internally inconsistent because it posits a fully competitive market for some inputs (such as the extent to which technological or demographic change instantaneously adjusts asset values) and a market dominated by a single ubiquitous provider for other inputs (such as scale economies, capital costs, and depreciation). By mixing and matching these contradictory assumptions, and by choosing for each cost model input and variable whichever assumption tends to lower estimated network costs, the current formulation of TELRIC arbitrarily drives down UNE rates below any coherent understanding of cost and thereby distorts the entry and investment decisions of all carriers. For this reason alone, TELRIC reform is necessary.

Although the Commission highlighted this very concern in its *NPRM* (¶¶ 4, 50-52), the champions of the pricing status quo have no credible response. AT&T, for example, tries to address the concern by recasting “[t]he relevant economic paradigm that underlies the TELRIC standard” not as “perfect (or near-perfect) competition, with multiple facilities-based competitors, but [as] *perfect contestability*.” Comments of AT&T at 90 (Dec. 16, 2003) (“AT&T Comments”) (emphasis added). But this latest theoretical contrivance accomplishes nothing. First, because it assumes away the substantial costs of entry and exit, it is even more arbitrarily detached from reality than the Commission’s traditional emphasis on “replicat[ing] . . . the conditions of a competitive market.” First Report and Order, *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, 11 FCC Rcd 15499, 15846 ¶ 679 (1996) (“*Local Competition Order*”). Second, the “perfect contestability” construct lets in

through the back door the same methodological inconsistencies as the perfect competition model itself, since an incumbent's prices can be "disciplined by the threat of competitive entry," AT&T Comments at 90-91, only to the extent that they exceed the costs of the hypothetical would-be entrants *upon their entry*. If AT&T's theory were applied consistently, however, the costs of those entrants would be far higher than the incumbent's because, even apart from the (assumed-away) costs of entry, the entrants would, by hypothesis, lack the incumbent's present scale economies and would face a higher cost of capital. Finally, as one of AT&T's own experts has written, "the threat of entry," even in perfectly contestable markets, "will not prevent the innovating firms in the field from recovering their *sunk costs*" because "[e]ntry will occur and drive down prices only if those prices are above the levels needed to cover these costs."¹ If perfect contestability will not prevent firms from recovering their sunk costs, a perfect contestability construct cannot logically justify limiting firms to the often much lower costs measured by TELRIC in its current form. In short, AT&T's new "paradigm" is every bit as nonsensical as it seems as a basis for setting UNE rates.

The CLECs likewise present no serious response to the Commission's concern that "the excessively hypothetical nature of the TELRIC inquiry creates the potential for a TELRIC proceeding to become a 'black box' from which a variety of possible rates may emerge." *NPRM* ¶ 7. TELRIC's radical indeterminacy is undeniable to anyone who has worked on a UNE cost docket. As former Colorado PUC Chairman Raymond Gifford observes, "TELRIC rate-setting has the analytical consistency of watery porridge," and its emphasis on speculation "makes the entire regulatory process dishonest." Comments of Progress and Freedom Foundation, at 5, 9

¹ William J. Baumol, *The Free-Market Innovation Machine: Analyzing the Growth Miracle of Capitalism* 166-67 (2002) (emphasis added and deleted).

(Dec. 16, 2003). Because the CLECs have the least to gain by making TELRIC more rigorous, however, they pretend that TELRIC's present indeterminacy is either a fiction derived from "ILEC sound bites," Comments of MCI, at 4 (Dec. 16, 2003) ("MCI Comments"), or, if real, then the result of ILEC "rhetoric and cost study gamesmanship." AT&T Comments at 2. These curious *ad hominem* attacks, ventured by the same parties that freighted the Commission's section 271 proceedings with one frivolous TELRIC objection after another, are no substitute for substance.

Indeed, to recall just how unhinged from reality the CLECs' TELRIC advocacy has become, the Commission need look no further than the CLECs' own input-specific wish lists in this proceeding. The same CLECs that try to present TELRIC as an exemplar of reasonableness simultaneously seek the Commission's affirmation that the following positions, which these CLECs have pressed in cost proceedings across the nation, are appropriate—indeed, necessary—applications of the current TELRIC methodology:

- In determining the cable placement costs a carrier could save by sharing digging expenses with other utilities, such as cable or power companies, regulators should imagine not just all such savings that would be possible if the telecommunications network itself were being built from scratch, but also "all sharing opportunities that would exist if . . . utility networks were being built anew" as well. AT&T Comments at 71 (emphasis added). That is, not only should regulators assume away all features of existing telecommunications networks ("scorched node"), they also should assume away independent characteristics of all other utility networks and much of the rest of the world outside the telecommunications networks as well ("scorched city"), at least when doing so reduces cost estimates.
- In calculating efficient fill factors, regulators should ignore not just the practices of the ILECs whose costs are at issue, but also the practices of all recent CLEC entrants as well. Why? Once a CLEC succeeds in capturing significant market share, "the competitor's actual embedded fill levels would be irrelevant in determining forward-looking fill rates because they too would reflect the inefficiencies in the embedded network." Declaration of Joseph P. Riolo on Behalf of AT&T ¶ 69 (Dec. 16, 2003) ("Riolo (AT&T) Decl.>").
- To justify raising fill factors to very high levels, regulators should recognize that "facilities-based alternatives" to wireline technology, such as rival cable or wireless offerings, "decrease demand for [existing] copper lines." AT&T Comments at 66. But in

addressing the cost of capital, regulators should adopt the diametrically opposing (and demonstrably false) position that “there is little, if any, risk that the ILECs will lose their customers to facilities-based competition.” AT&T Comments at 79 n.28.

- The fact that intermodal competition will soon force ILECs to replace their existing circuit-switched networks with next-generation packet-switched technology is not a reason for raising UNE rates somewhat to account for the risks of this new competitive environment and the resulting shortness of asset lives. Instead, it is a reason for compelling ILECs to lease their “soon-to-be-obsolete network equipment”—including, apparently, copper loops and all circuit switches—at the dramatically lower “variable cost of maintaining and operating those assets.” MCI Comments at 14-15.
- “CLECs should not be required to bear any of the ILEC’s costs of modifying and developing its OSS to make the OSS accessible to CLECs,” and such costs should instead be “spread among the ILEC’s retail customers[.]” AT&T Comments at 107. Why should the ILECs’ customers help pay for the costs of CLEC entry? Because, even though the costs are incurred solely for the benefit of CLECs and their customers, “the cause of these costs” is somehow “not the CLEC,” but just “the legal mandate that ILECs provide nondiscriminatory access to their OSS.” *Id.* at 107-08.

Bizarre claims like these are the rule in CLEC pricing advocacy, and a disquieting number of state commissions take them seriously. Those facts alone belie the CLECs’ argument that TELRIC has become sensible in conception and determinate in application. Moreover, as Professors Aron and Rogerson have confirmed, TELRIC’s indeterminacy has resulted in broad disparities in UNE rates across the country that cannot be explained by state-by-state cost differences.²

Ultimately, the problem with TELRIC in its current form can be summed up in a single observation: it improperly models the hypothetical forward-looking costs of a fictitious, impossibly efficient carrier rather than the actual forward-looking costs of the ILEC, whose real-world efficiency has been enforced by years of price cap regulation and the emergence of

² See Debra J. Aron & William Rogerson, *A Further Analysis of the Economics of UNE Pricing* § 4 (Jan. 30, 2004) (“Aron/Rogerson Jan. 2004 Paper”) (attached as Exh. A); Debra J. Aron & William Rogerson, *The Economics of UNE Pricing* § 4.4 (Dec. 16, 2003) (“Aron/Rogerson Dec. 2003 Paper”) (attached as Exh. A to SBC’s opening comments).

aggressive intermodal competition. Thus, the answer to the second basic question in this proceeding—*how* should TELRIC be reformed—is that the Commission should follow through on its proposal to “define the relevant network” in a TELRIC cost proceeding “as one that incorporates upgrades planned by the incumbent LEC over some objective time horizon”—such as the midpoint of a three-year planning period, as SBC has proposed—and that “take[s] as given whatever existing facilities will remain in the network at the end of the designated period” while “captur[ing] technological evolution within that period.” *NPRM* ¶ 54. This approach grounds the TELRIC replacement cost inquiry more firmly in reality by taking more as given about the existing network than TELRIC does today, but it differs in that respect from the existing formula only in degree, not in kind. These adjustments are necessary to rid TELRIC of the internal inconsistencies and black-box indeterminacy that the Commission rightly finds troubling.

Contrary to the suggestion of some CLECs, the Commission’s proposed approach does not remotely resemble an “embedded cost” methodology. To the contrary, it prices assets at their current costs, not their book costs, and thus reflects the effects of technological innovation on asset values. As the Commission has further indicated, *NPRM* ¶ 54, this proposed approach strikes “an appropriate middle ground” between a “green field” or “scorched node” methodology on the one hand and a pure reproduction cost methodology on the other. Unlike the latter methodology, the proposed approach takes the network not as it exists today, but as it will evolve during the planning period, and it excludes from the resulting technology mix any assets whose obsolescence would produce anomalies in the calculation of forward-looking cost. As Professors Aron and Rogerson observe,

[This proposal] provide[s] a reasonable approach to estimating ILECs’ true forward costs, while at the same time providing a relatively concrete standard that can be based more firmly on objectively verifiable data. . . . Given the additional need to

provide state regulators with an institution that allows them to credibly commit to reimbursing ILECs for their investment, we believe that this represents the best possible solution to a difficult problem.

Aron/Rogerson Dec. 2003 Paper § 6 at 44.

Finally, there is no merit to the CLECs' claim that basing costs on the attributes of an ILEC's network would complicate, rather than simplify, the task of determining forward-looking UNE costs. The question here is not (as the CLECs suggest) whether regulators should abandon cost models altogether and try to replicate the characteristics of the existing network "in atomistic detail." AT&T Comments at 5, 28, 58. The question instead is whether the *objective* of a UNE cost model should be to reflect the general characteristics of the ILEC's actual network or, instead, to reflect the speculative characteristics of an entirely hypothetical network. Cost models of the former type are quite feasible to construct, as experience has shown; cost models of the latter type are precisely the black boxes that have brought TELRIC into disrepute. And, as we discuss below, it is not only appropriate but perfectly practicable to model forward-looking network costs on the basis of an incumbent's real-world data, including its ARMIS and accounting records, its economic depreciation lives, its experience performing non-recurring activities, and tested, reality-oriented engineering principles. Such data, in fact, present a far more objective and relevant starting place for modeling forward-looking costs than speculation by CLECs or by the regulators themselves.

DISCUSSION

I. TELRIC SHOULD BE REFORMED AS PROPOSED IN THE *NPRM*.

A. The Current Formulation of TELRIC Is Incoherent in Theory.

This TELRIC reform proceeding properly begins with first principles—and, in particular, with the rationale for using forward-looking cost as the basis for UNE pricing in the first place. That rationale is more straightforward and less abstruse than those suggested by the CLECs that defend the status quo. As Professors Aron and Rogerson have explained, when a “CLEC decides whether to purchase a UNE or provision [a] network element itself, it compares the prices it will be charged for the UNE with its own forward-looking costs of providing the element.”³ If those UNE prices accurately reflect what *the ILEC* would actually spend today for the element in question—*i.e.*, if they reflect the ILEC’s *actual* forward-looking costs—the CLEC will choose whichever option (leasing from the ILEC or self-provisioning) accomplishes the relevant network task at the lowest cost and thus with the highest degree of economic efficiency. At the same time, ensuring the ILEC that it will be able to recover *its* actual forward-looking costs—as opposed to the arbitrarily lower costs of some fictional carrier—will help reassure the ILEC that it makes good business sense to continue investing in the maintenance and evolution of its network.

In short, setting UNE rates to reflect an ILEC’s actual forward-looking costs is necessary (i) to align a CLEC’s lease-or-build decisions with society’s larger interest in allocative efficiency and (ii) to give ILECs appropriate incentives to continue making socially valuable investments in their networks. The answer to the Commission’s questions about the proper objectives of “price signals,” *see NPRM* ¶ 39, is as straightforward as that. And, as next

³ Aron/Rogerson Dec. 2003 Paper § 2.3, at 14.

discussed, it is a far more sensible account than the exercise in tortured obscurantism that the CLECs try to pass off as reasoned economic analysis. *See* Aron/Rogerson Dec. 2003 Paper § 1.

1. The Hypothetical Carrier Construct Is Self-Contradictory.

The CLECs would have regulators determine not the actual forward-looking costs of the ILEC—even though *those* are the costs relevant to efficiency-inducing price signals—but the speculative “costs” of a hypothetical carrier that builds a ubiquitous network in a flash and then instantaneously manages to capture the entire customer base within the modeled region. This “hypothetical carrier” construct is as self-contradictory in conception as it is indeterminate in application. As the Commission observes, *NPRM* ¶¶ 49-51, that construct employs two radically inconsistent sets of assumptions, each of which applies to given cost inputs if and only if it tends to produce lower estimated UNE costs. Specifically, this hypothetical carrier construct incorporates (i) a perfectly competitive market assumption for purposes of determining the speed and ubiquity with which technological and demographic changes reduce the “value” of a telecommunications network, but (ii) a sole, ubiquitous carrier assumption for such cost inputs as scale economies, cost of capital, and depreciation. *See* SBC Comments at 13-16.

To the Commission’s concern about these “central internal tensions,” *NPRM* ¶ 50, the CLECs respond principally by disparaging the Commission for “accept[ing] the rhetoric and assumptions of the ILECs’ polemical attacks against TELRIC.”⁴ And, when they purport to address the merits of the Commission’s concern, the CLECs resort to rhetorical diversion. First, they contend that any concern about TELRIC’s theoretical incoherence rests on “a Bell caricature”—*i.e.*, a purportedly ILEC-inspired misrepresentation of TELRIC as “assum[ing] the ‘instantaneous’ and ‘ubiquitous’ *deployment* of new technology throughout local networks.”

⁴ MCI Comments at i; *see also* AT&T Comments at 2.

AT&T Comments at 4 (emphasis added). Instead, the CLECs contend, TELRIC requires assuming only an instantaneous and ubiquitous “*revaluation*” of all assets within those networks whenever a new efficiency-enhancing technology is introduced or whenever the demographics within a serving area have changed in unforeseen ways. *Id.* (emphasis added). That CLEC model of reality, however, is the only “caricature” at issue here. Whether couched as an assumption of instantaneous deployment or of asset revaluation, it leads ultimately to analytical incoherence.

As explained in SBC’s opening comments (at 17-18), the type of radical “revaluation” hypothesized by the CLECs selectively assumes conditions reaching or approaching perfect competition. Only in a perfectly competitive market—one contested by many independent firms without market power, vying for the business of the customer—would any given firm always price its services as though some other carrier could otherwise instantaneously win that customer by providing the same services at costs reflecting only the most cutting-edge business methods. Those are the *only* conditions in which the “economic value” of one carrier’s network could be “always limited, or ‘capped,’” by the costs of *other* networks “deployed with the most efficient technology available today.” AT&T Comments at 23. In less perfectly competitive markets, prices reflect the average costs of (among other things) a firm’s real-world asset mix, which inevitably contains a combination of recent and less recent technology.

At the same time, the CLEC proponents of this model assume a market dominated by a ubiquitous carrier with 100% market share whenever that contrary assumption produces cost-lowering inputs. As SBC explained in its opening comments (at 13-20), this hodge-podge of warring assumptions does not “mimic the performance” of a perfectly competitive market, as the CLECs suggest (*e.g.*, AT&T Comments at 12). Nor, for that matter, does it mimic the operation

of any market that could exist in the real world, because there could be nothing approaching the requisite degree of price-lowering perfect competition in an industry that, like this one, is both capital-intensive and technologically fluid. *See* SBC Comments at 2. And, even if such perfect competition were possible, applying a perfect competition assumption across the board would lead to a radical *increase* in UNE rates. Such competition would inexorably produce, for each carrier, very limited scale economies, very short depreciation lives, very high costs of capital—and almost instantaneous insolvency, given each carrier’s inability to cover its long-run average costs. *See id.* at 18-19.

In short, the hypothetical most-efficient carrier construct can perform no meaningful role in any theoretically sound cost methodology. It is a *deus ex machina* concocted to drive UNE rates down and rationalize a competitively imbalanced and investment-chilling wealth transfer from ILECs to non-facilities-based CLECs. The result is superficially higher numbers for sales- and marketing-oriented “competition” in the short term, but much lower numbers for value-adding facilities-based competition in the long term. No CLEC will build facilities of its own in this world, with its inevitable trade-offs, if it can instead exploit pricing opportunities that reflect the cheapest of mutually inconsistent cost assumptions about an imaginary world. And ILECs too will err on the side of forgoing network investment if they know that they will never be adequately compensated even for their forward-looking costs because the game is rigged against them. Indeed, ILECs will lack even the requisite capital to make those investments given that, at the same time they must provide these below-cost *wholesale* services to CLECs, antiquated state universal service policies compel them to provide below-cost *retail* services to all the high-cost end users that cherry-picking CLECs do not wish to serve.

Some CLECs claim that the more ILECs are confronted with comprehensive obligations to lease their facilities at deeply noncompensatory rates, the more ILECs will respond by sinking greater sums in the underlying facilities that will be the subject of this regime; indeed, the CLECs claim that they have evidence that shows that this already has occurred. *See* AT&T Comments at 36; Comments of Z-Tel, at 9-11 (Dec. 16, 2003) (“Z-Tel Comments”). On inspection, this claim turns out to be every bit as wrong empirically as it is absurd logically. *See* Debra J. Aron, *The Effects of Below-Cost TELRIC-Based UNE Prices on CLEC and ILEC Investment* (Jan. 30, 2004) (attached as Exh. B). The CLECs separately claim that the Commission should no longer worry about the extent to which TELRIC suppresses *their* investment incentives. They reason that, under the *Triennial Review Order*, “[i]f elements are available for lease, they cannot economically be duplicated by the CLEC,” and “[t]herefore there is little risk that lease rates for these *essential facilities* will suppress facilities-based competition.”⁵ But this, too, is nonsense. The *Triennial Review Order* itself makes clear that, because the Commission has construed the “impairment” standard more broadly than the essential facilities standard, current unbundling obligations extend well beyond presumptively nonduplicable “essential facilities.” *See* Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, *Review of Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, 18 FCC Rcd 16978, 17049-50 ¶ 107 (2003) (“*Triennial Review Order*”).

The bottom line—that too-low UNE rates depress incentives for investment—is so obvious as a matter of common sense that it is engrained in the principles of American antitrust and regulatory law. As Judge Easterbrook recently observed for the Seventh Circuit:

⁵ MCI Comments at 12 (emphasis added); *see also* Z-Tel Comments at 9.

Prices for unbundled elements affect not only the allocation of income among producers, but also new investment and innovation: if the price to rivals is too low, they won't build their own plant (why make capital investments when you can buy for less, one unbundled element at a time?), and the incumbents won't maintain or upgrade their facilities (why make costly capital investments if you have to sell local loops to rivals for less than it costs to produce them?).⁶

And, as the Supreme Court reaffirmed just over two weeks ago, “[c]ompelling [incumbents] to share” their physical infrastructure at low regulated rates “is in some tension with the underlying purpose of antitrust law, since it may lessen the incentive for the [incumbent], the rival, or both to invest in those economically beneficial facilities.”⁷

2. The “Perfect Contestability” Construct Is As Incoherent As the Traditional “Perfect Competition” Construct.

AT&T tries to reconcile TELRIC's internal inconsistencies by subtly reformulating the model's central postulate, but to no avail. “The relevant economic paradigm that underlies the TELRIC standard,” AT&T says, “is not perfect (or near-perfect) *competition*, with multiple facilities-based competitors, but *perfect contestability*, a more general and robust model of competition.” AT&T Comments at 90 (emphasis added).⁸ Under this approach, the ILEC is

⁶ *AT&T Communications of Illinois, Inc. v. Illinois Bell Tel. Co.*, 349 F.3d 402, 404 (7th Cir. 2003).

⁷ *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP*, 124 S. Ct. 872, 879 (2004).

⁸ Z-Tel disparages as “folklore” the notion that *some* hypothetical model of competition is needed to justify TELRIC's radical cost-lowering assumptions, and it denies that the *Local Competition Order* bases TELRIC on such a model. See Robert B. Ekelund, Jr. & George S. Ford, *Some Thoughts on the FCC's Inquiry into TELRIC*, at 6-7 (Dec. 16, 2003) (attached as Exhibit 3 to Z-Tel's Comments). Z-Tel has overlooked the Commission's long-standing account of TELRIC as a methodology designed to “replicate[], to the extent possible, the conditions of a competitive market.” E.g., *Local Competition Order* at 15846 ¶ 679. And, on the merits, Z-Tel's position is tantamount to abdicating the task of justifying TELRIC at all.

conveniently “the only significant firm in the market,” with all the attendant scale economies, but “its prices are disciplined by the threat of competitive entry, not by actual competition.” *Id.* at 90-91. AT&T asks the Commission to imagine a world in which (i) a single carrier occupies the entirety of the market but (ii) the assembled legions of potential rivals lie poised at the gates, ready at a moment’s notice to deploy perfectly efficient, cutting-edge networks of their own if ever the dominant carrier prices any of its services to any customer above the idealized low costs of one such network. This constant potential threat, AT&T contends, constrains the incumbent’s costs as much as actual competition would. *Id.*

This “perfect contestability” contrivance—with its myriad hibernating CLECs ready to spring instantaneously into action—has no theoretical integrity. First, by assuming away the substantial costs of entry and exit in this capital-intensive market, it departs even more senselessly from reality than the traditional “perfect competition” construct. Second, even if taken on its own terms, the “perfect contestability” construct cannot logically perform the rate-lowering function AT&T expects of it while bringing TELRIC closer to internal analytical consistency. The prices charged by the “only significant firm in the market” could be “disciplined by the threat of competitive entry” (AT&T Comments at 90-91) only to the extent that the costs of the prospective new entrants *upon their entry into the market*, and thus the prices they could charge, are lower than the incumbent’s costs. By definition, the costs upon entry of these prospective new entrants would be the costs of carriers in a competitive market populated by multiple facilities-based rivals—not the costs of a single ubiquitous firm. And that leads the analysis right back into the same internal contradictions that already afflict TELRIC. For the reasons discussed, any given entrant’s costs in this hypothetical market would be *higher* than the

incumbent's actual forward-looking costs, because (for example) its scale economies would be lower, its capital costs higher, and its depreciation lives shorter.

Finally, even in a market characterized by unattainably perfect contestability, "the threat of entry will not prevent the innovating firms in the field from recovering their *sunk costs*," because "[e]ntry will occur and drive down prices only if those prices are above the levels needed to cover these costs"—as one of AT&T's key retained experts has observed.⁹ *A fortiori*, AT&T's "perfect contestability" construct cannot justify limiting firms to the generally much lower costs estimated by the present TELRIC model.

Similar considerations undermine AT&T's suggestion that consistent application of a perfect competition (or contestability) premise should produce *lower* UNE rates on the theory that the prices charged by a carrier in a perfectly competitive (or contestable) market "may fall to short run marginal cost—which is below TELRIC." AT&T Comments at 13. AT&T's logic on this point supplies a *reductio ad absurdum* for AT&T's own defense of TELRIC. Firms must be able to recover their average costs over the long run or else they will go out of business. As discussed in SBC's opening comments (at 2, 16), current applications of TELRIC preclude recovery of such costs and, in effect, posit a world in which numerous facilities-based competitors enter the market and then promptly declare bankruptcy. A model based on "short run marginal cost," where prices would fall even below TELRIC levels, would be more incoherent still. Either way, a consistent application of TELRIC's underlying premises produces

⁹ William J. Baumol, *The Free-Market Innovation Machine: Analyzing the Growth Miracle of Capitalism* 166-67 (2002) (emphasis added and deleted); see also W. Kip Viscusi, John M. Vernon, and Joseph E. Harrington, Jr., *Economics of Regulation and Antitrust* 261 (3d ed. 2000) (observing that, as a logical corollary to the antitrust doctrine correcting the "cellophane fallacy," "[a] rational monopolist would, in fact, raise price until its product became a substitute for alternatives").

absurd results. That is a reason for reforming TELRIC, not, as AT&T appears to believe, for leaving it substantively unchanged while dressing it up in a new “economic paradigm” of byzantine complexity. AT&T Comments at 90.

Finally, to observe that TELRIC is radically self-contradictory in its current formulation (and would remain so under AT&T’s proposed revision) is not remotely to “quarrel[] with the very concept of pricing based on economic costs.” AT&T Comments at 24. The Commission can and should base prices on the economic costs of the *ILEC* in the *actual* market, because that approach will send appropriate price signals to the ILECs and CLECs operating in that actual market. What the Commission should *not* do is use mutually contradictory cost assumptions to describe the “costs” of a fictional carrier in an implausible market of the CLECs’ imagination, in which the conventional laws of economics no longer apply. *See* Aron/Rogerson Dec. 2003 Paper § 1. Whether styled as perfectly competitive or “perfectly contestable,” *see* AT&T Comments at 91, that “market” serves no valid economic purpose, even as a theoretical construct.

B. The Current Formulation of TELRIC Is Indeterminate in Application.

As the Commission has indicated, TELRIC needs reform for an additional reason that is wholly independent of that methodology’s internal contradictions. Because the hypothetical network analyzed in current TELRIC proceedings is radically unlike any actual network that has ever been built, those proceedings inevitably produce indeterminate speculation about what a “most efficient” network might look like and silly-question-silly-answer disputes in multiple contexts about just how much of the real world TELRIC compels regulators to ignore. *See NPRM* ¶ 7.

The CLECs respond that the *NPRM*’s concern about the role of unsupported conjecture within the TELRIC inquiry “is based on seven years of ILEC sound bites and not on any feature of TELRIC.” MCI Comments at 4. In fact, however, TELRIC’s intractable indeterminacy is all

too familiar to the state regulators who have to deal with it. As former Colorado PUC Chairman (and TELRIC veteran) Raymond Gifford observes, “TELRIC rate-setting has the analytical consistency of watery porridge” and “makes the entire regulatory process dishonest” because “[t]he forward-looking cost models tendered by the respective sides in a TELRIC proceeding are prototypical ‘black box’ computer models,” “[t]he perfectly adequate rebuttal to any TELRIC cost model is: ‘says you,’” and “there is simply no principled manner for a regulator to determine the ‘right’ TELRIC rate.”¹⁰

The CLECs nonetheless claim that, with their guidance, the state commissions have reduced the application of TELRIC to a finely calibrated science. In AT&T’s words, those state commissions, while initially befuddled by the Bell companies’ “campaigns of obfuscation and obstruction,” have “increasingly learned to cut through the rhetoric and cost study gamesmanship and get TELRIC-based pricing right.” AT&T Comments at 2. As an initial matter, AT&T is poorly positioned to engage in this kind of rock-throwing, given the inexhaustible supply of specious TELRIC objections it forced the Commission to consider and reject in one section 271 proceeding after another. More fundamentally, however, if TELRIC were as methodologically determinate as AT&T says, and if the states had somehow learned to “get TELRIC-based pricing right,” there would not be such widely and unaccountably disparate UNE rates from state to state—a disparity that, as Professors Aron and Rogerson have shown, cannot be explained on the basis of state-specific cost differences. *See* Aron/Rogerson Jan. 2004 Paper § 4; Aron/Rogerson Dec. 2003 Paper § 4.4.

¹⁰ Comments of Progress and Freedom Foundation at 5, 9 (Dec. 16, 2003) (submitted by former Colorado PUC Chairman Raymond Gifford).

But if there were any doubt about TELRIC's radical indeterminacy, it would be resolved by the input-specific wish lists the CLECs themselves include in their comments. These wish lists demonstrate the extent to which TELRIC as it stands today is about gamesmanship rather than serious economics. The problem is not that the CLECs' advocacy is generally untenable—although to be sure it is, as discussed more fully in SBC's opening comments and in Part II of these reply comments. The root of the problem is that TELRIC, as now formulated, permits such advocacy to be presented in the apparent expectation that it will be taken seriously. What follows are half a dozen examples of CLEC pricing advocacy *in this proceeding* that illustrate the extent to which it is the CLECs, rather than ILECs, that persistently exploit TELRIC's openness in seeking economically nonsensical results.

1. *Structure sharing*. "Sharing" percentages measure the savings that a carrier can achieve by splitting cable placement costs with some other utility, such as a power or cable company, that needs to install its own facilities at the same time. As an empirical matter, as discussed in SBC's initial comments (at 61-62) and in Part II here, sharing produces very limited cost savings for new subterranean cable placed in already-developed areas (*i.e.*, the vast bulk of the region studied in any cost model), and that would be true even if the existing network were assumed away in those areas and the incumbent had to install its cable from scratch. This is because, by definition, those are the areas in which the "other utilities" have already dug up the ground to install most of their facilities. To get around this problem, and to justify the up to 67% savings it attributes to sharing opportunities even in developed areas, AT&T asks the Commission to hypothesize away not just the existing telephone network, but the existing power and cable utilities as well. "[S]unk investment in existing support structure," it says, "provides

no reason not to exploit all sharing opportunities that would exist if telephone *and utility* networks were being built anew.” AT&T Comments at 71 (emphasis added).

This carries TELRIC beyond the “scorched node” model to something more like a “scorched city” construct, inviting regulators to disregard any features of the world—inside or outside of the telecommunications network—that tend to increase costs. The Commission might have thought it had put such advocacy to rest when it warned against using TELRIC to “assume[] away not just the features of an incumbent LEC’s existing network but also attributes of the real world in which incumbents and competitors operate.” *NPRM* ¶ 47. But the very abstruseness of the current TELRIC framework enables CLECs to continue pressing such bizarre positions while varying the details of the pseudo-economic rationale.

2. *Fill factors.* “Fill” measures the amount of spare capacity in an efficiently run network; the higher the fill, the lower the spare capacity, and thus the lower the UNE rate (because each working unit of capacity bears a smaller allocation of the costs of spare). *See* SBC Comments at 63-64. To drive UNE rates down, CLECs advocate very high fill factors. The problem is that neither ILECs nor CLECs build facilities with such inefficiently razor-thin margins of spare capacity, because doing so would impair network reliability and require senselessly wasteful repetition of network provisioning tasks. This has always been something of an embarrassment for the CLEC advocates of high fills. It is one thing for them to argue that ILECs are inefficient, despite years of price caps and intensifying intermodal competition. It is quite another for CLECs to argue that they themselves fall well short of their own ideal of an “efficient carrier.” In the states, the CLECs often deal with this conundrum by withholding evidence of their own (moderate) fills, just as they typically withhold evidence of their own (limited) sharing experience. Now they ask the Commission to bless the suppression of such

evidence by ruling that “the fill rates at which competitors operate are *wholly irrelevant* in establishing forward-looking factors.” Riolo (AT&T) Decl. ¶ 69 (emphasis added).

How can CLECs, which already (wrongly) deny the relevance of an ILEC’s own fill factors, *also* contend that the engineering choices made *by CLECs today*, in building state-of-the-art networks, are “wholly irrelevant” to the fills of a hypothetically “efficient carrier?” Only if TELRIC requires regulators to ignore the real-world experience of *any* carrier, whether ILEC or CLEC. AT&T is surprisingly explicit on this point, arguing that once a CLEC succeeds in capturing significant market share, “the competitor’s actual embedded fill levels would be irrelevant in determining forward-looking fill rates because *they too would reflect the inefficiencies* in the embedded network.” Riolo (AT&T) Decl. ¶ 69 (emphasis added). AT&T is saying: all carriers are inefficient; I am a carrier; therefore I am inefficient—and thus never mind that my engineering practices, which I’d just as soon conceal, are at war with my advocacy. Thus, AT&T concludes, the only fill factors that a regulator should consider are the ones that AT&T’s consultants such as Mr. Riolo conjure up for their imaginary networks. Only if the governing cost methodology is itself incoherent would any party embrace such nonsense.

3. *Cost of capital.* One of the cornerstones of the CLECs’ advocacy for high fill factors is that “facilities-based alternatives” to wireline technology, “such as cable telephony” or wireless, “may decrease demand for [existing] copper lines,” thereby (the CLECs say) removing the need for inclusion of spare capacity within existing wireline networks. AT&T Comments at 66. Though not remotely a basis for *raising* fill factors (*see* SBC Comments at 68-69), such line loss is not just a possibility; it is a harsh reality of the business environment in which ILECs now

operate,¹¹ and it is one of several factors that have led Wall Street to punish ILEC share prices. From an ILEC's perspective, that reality becomes more sobering by the month, as emerging VoIP services enable end users to cancel their telephone service and rely instead on cable modem and other broadband platforms to place voice calls, and as wireline-to-wireless number portability makes "cutting the cord" that much easier for millions of Americans. For example, just within the last few weeks, Merrill Lynch downgraded SBC's stock from "neutral" to "sell" because "growth prospects at SBC, and of course the other RBOCs, remain challenged by secular factors, namely high levels of competition and growing substitution trends. We see limited scope for favorable regulatory changes in 2004 and expect the telecom debate to focus increasingly on technology changes (VoIP) destabilizing the legacy voice business longer term."¹²

But when they turn from fill factors to the competitive risks relevant to the cost of capital, these same CLECs forget all about this "decreas[ing] demand for copper lines" and its consequences. In arguing for a low cost of capital, they venture instead that "there is little, if any, risk that the ILECs will lose their customers to facilities-based competition" for any elements still subject to unbundling obligations—including, of course, copper lines. AT&T Comments at 79 n.28; *accord id.* at 90. That proposition is not just absurdly inaccurate, but also baldly at odds with the CLECs' own fill factor advocacy. Again, only a methodology that is itself shot through with internal inconsistencies could induce CLECs to engage in such blatant self-contradiction.

¹¹ See FCC Ind. Anal. & Tech. Div., *Local Telephone Competition: Status as of December 31, 2002*, at Table 1 (June 2003).

¹² Merrill Lynch, *SBC Communications Inc.: Lowering Opinion from Neutral to Sell*, Telecom, at 1 (Jan. 9, 2004).

4. *Depreciation lives.* Under universal principles of cost accounting, the faster that technological change warrants replacement of existing assets, the shorter the depreciation lives that should be set for them. This, of course, is a time of unprecedented technological change. For example, the increasingly ubiquitous IP platform that makes traditional telephone companies vulnerable to cut-throat intermodal competition will warrant the eventual replacement of many circuit switches with packet switches to accommodate IP traffic. Because the prospect of such competition-induced obsolescence requires shortening the depreciation lives of existing facilities, it leads, appropriately enough, to somewhat higher UNE rates.

Not so, MCI contends: so long as lines are being lost, such “soon-to-be-obsolete network equipment,” including 5ESS digital circuit switches and copper loops, should be priced at “the variable cost of maintaining and operating those assets,” and no forward-looking capital costs should be recovered. MCI Comments at 14-15; *see also id.* at 26. In effect, MCI is asking for permission to lease the core of the traditional telephone network essentially *for free*, as if the depreciable lives of all the assets in that network were over, instead of compressed by competitive and technological risks. And it seeks that outcome even though (i) the relevant facilities are still the primary means of providing telecommunications services, (ii) they are still the principal assets in any ILEC network, and (iii) the forward-looking (replacement) costs of those facilities—as well as the undepreciated book costs—are enormous. To adopt this approach would require not just outright confiscation of private property, in violation of the Takings Clause, but abandonment of what the Commission has always identified as the touchstone of a rational forward-looking pricing methodology: the equation of UNE rates with today’s costs of

replacing network facilities.¹³ But in the anything-goes world of TELRIC cost modeling, advocates feel increasingly free to place bets on such methodological dark horses.

5. *Operational Support Systems (“OSS”) costs.* At the direction of state and federal regulators, ILECs have spent hundreds of millions of dollars upgrading their OSS to accommodate CLEC requests for the use of network elements. In an efficient market, a firm will seek to collect from a given class of customers the costs of serving those customers (as the “cost causers”). That is as true of wholesale markets as of retail ones. Ever on the lookout for new pretexts to fob off on ILECs the various costs that it causes, AT&T now asserts that “CLECs should not be required to bear *any* of the ILEC’s costs of modifying and developing its OSS to make the OSS accessible to CLECs.” AT&T Comments at 107 (emphasis added). AT&T contends that “the cause of these costs is not the CLEC, but the *legal mandate* that ILECs provide nondiscriminatory access to their OSS as part of the transition to a competitive market.” *Id.* at 107-08 (emphasis added). AT&T concludes that each ILEC should “bear its own costs” for serving the needs of CLECs, so that those costs will be “spread among the ILEC’s retail customers[.]” *Id.*

This is gibberish. *Of course* the ILEC has a “legal mandate” to provide access to its systems, just as it has a legal mandate to provide collocation space in its central offices or to perform hot cuts. In each case, however, the CLEC is the party imposing costs on the economy, and the CLEC is the party that should internalize them. If those costs are worth incurring—*i.e.*, if they enable the CLEC to produce commensurate value in the form of new services—the market will reward the CLEC by supporting retail prices that more than cover those costs. If the

¹³ See NPRM ¶¶ 2, 17, 30; see also Brief for Respondents FCC and the United States, *Verizon Communications Inc. v. FCC*, 535 U.S. 467 (2002), 2001 WL 726772 at *5 (“FCC S. Ct. Br.”).

CLEC cannot cover those costs through its retail pricing, that is not because they pose a “barrier to entry” (AT&T Comments at 108), but because the costs outweigh any corresponding economic benefits—*i.e.*, because causing the costs to be incurred is an objectively inefficient use of social resources. In no event should this market dynamic be skewed by shifting the costs onto someone else, let alone “the ILEC’s retail customers.” Indeed, it is difficult to imagine a regulatory arrangement that is more competitively warped than that one.

6. *Flow-through assumptions.* These CLECs not only would shift to the ILECs and their retail customers the costs of developing new electronic systems for the CLECs’ benefit, but would then attribute to those systems a degree of hyperefficiency unmatched anywhere in today’s world. Specifically, the CLECs urge the Commission to endorse their position that, “[i]n a forward-looking environment,” fully 98% of CLEC orders for UNEs should be presumed to “flow through” an ILEC’s electronic systems without any need for manual intervention. AT&T Comments at 109-10. That presumption, the CLECs hope, will save them from ever having to pay for the flesh-and-blood (and often unionized) labor forces that actually process a substantial percentage of their orders. It is undisputed, however, that no real-world carrier’s OSS has ever remotely approached that level of flow-through.¹⁴

¹⁴ In one proceeding, a regular AT&T cost witness was asked how he could square AT&T’s proposal there for an across-the-board 98% flow-through assumption with the fact that, among other problems, many CLEC orders are still placed by fax—up to 20% of orders for certain UNEs—thereby requiring an ILEC’s manual intervention in each such case. The AT&T witness responded that, even though the cost of manual intervention is “a real cost that they’re [ILECs] incurring today on behalf of CLECs, . . . *in the future*, that cost should not be there if we [CLECs] have an appropriate [automated] system installed.” *Investigation into Qwest Corp.’s Compliance with Certain Wholesale Pricing Requirements for Unbundled Network Elements and Resale Discounts*, Docket No. T-00000A-00-0194, Tr. at 1566-67 (Ariz. Corp. Comm’n Jul. 30, 2001) (emphasis added). The state commission generally accepted AT&T’s non-recurring cost model and, by implication, this argument. See Phase II Opinion and Order, *Re Qwest Corp.*, Docket No. T-00000A-00-0194, Decision No. 64922, at 33-34 (Ariz. Corp. Comm’n June 12,

This is just one respect—AT&T’s IDLC assumptions are another (*see* Part II.C.4 below)—in which AT&T’s own advocacy in the states belies its assurances to this Commission that “*TELRIC models, in actual practice, model technologies and practices that have been proven and widely deployed—including by the ILECs themselves.*” AT&T Comments at 25-26. They do no such thing. As illustrated by this and the other examples cited above, TELRIC inquiries only occasionally look empirically at how actual carriers operate in the market. Instead, the game is in the warring intuitions of “experts” about just how easy life will be for any carrier in “a forward-looking environment.”

* * *

SBC addresses specific input issues more comprehensively in its opening comments and in Part II of these reply comments. Our point for present purposes is more general. Because the very design of TELRIC requires extensive speculation, it is susceptible to radical manipulation by the CLECs, which have the most to gain from palming off enormous costs on their chief competitors (the ILECs). If those CLECs are willing to gamble their credibility as they have already done in this proceeding, even though they presumably have the strongest incentives here to present TELRIC in a reasonable light, the Commission should be rightly concerned about how wildly divorced from reality the CLECs’ advocacy has become in the states, where most UNE rates are actually set.

C. The Commission’s Proposed Revisions to TELRIC Are Methodologically Appropriate and Highly Practicable

For the reasons discussed, there is no serious dispute that TELRIC needs revision; the primary question is what form that revision should take. The Commission has proposed sensible

2002). It is, of course, the height of arbitrariness to penalize an *ILEC* for the inefficiencies of *CLECs* on the theory that someday in the future those CLECs will be less inefficient.

and incremental modifications to the basic TELRIC framework, modifications that would simultaneously resolve both TELRIC's "central internal tensions," *NPRM* ¶ 50, and the problem of its anything-goes indeterminacy. Specifically, the Commission has proposed "defin[ing] the relevant network as one that incorporates upgrades planned by the incumbent LEC over some objective time horizon . . . as documented, for example, in an incumbent's engineering plans," thereby "tak[ing] as given whatever existing facilities will remain in the network at the end of the designated period" while "captur[ing] technological evolution within that period." *Id.* ¶ 54. This approach, the Commission observes, "may provide an appropriate middle ground between the hypothetical assumptions required under our current rules and [a] replacement cost approach" that takes the features of the existing network as given in every physical particular¹⁵—i.e., a "reproduction cost" methodology. SBC would further refine this approach to specify that the relevant network should be taken at the midpoint of a three-year planning period, that the forms of network evolution should be confined to those actually documented in the ILEC's engineering plans, and that the ensuing facilities mix should exclude any obsolete facilities in order to avoid any of the anomalies often associated with a reproduction cost methodology. *See* SBC Comments at 31-33.

As the Commission suggests, *see NPRM* ¶ 54, this approach strikes exactly the right balance between, on the one hand, a reproduction cost methodology and, on the other, a "green field" or "scorched node" approach, which suffers from the logical inconsistencies and black-box

¹⁵ *NPRM* ¶ 54. As the Commission has made clear, TELRIC itself is a replacement cost methodology. FCC S. Ct. Br., 2001 WL 726772 at *5; *NPRM* ¶¶ 2, 17, 30. As the commenters in this proceeding have used the terms, a "reproduction cost" methodology is a type of "replacement cost" methodology that, unlike TELRIC, takes as given every physical detail of the existing network as that network exists at this moment, including all obsolete assets that would be anomalously expensive to duplicate because they are no longer available on the market.

characteristics discussed above. *See generally* SBC Comments at 13-24. The CLECs assert, however, that this approach would violate various economic principles by improperly combining “short term” and “long term” time horizons or by establishing a reproduction cost methodology by another name. *See, e.g.,* AT&T Comments at 42-47. But these are epithets in search of substance. Like the current version of TELRIC, the proposed alternative is a long run incremental cost approach that fully captures the costs of underlying capital investments as well as ongoing maintenance and other expenses. *See* SBC Comments at 33 n.42; *see also id.* at 27-28. And, like TELRIC today, it is a replacement cost methodology that asks how much it would cost to replace existing network assets—an inquiry that necessarily takes into account reductions in the market price of those assets due to technological innovation. *Id.* at 24-29. And, unlike a reproduction cost methodology, the proposed approach both “capture[s] technological evolution within th[e] [planning] period,” *NPRM* ¶ 54, and excludes from the resulting technology mix any obsolete facilities whose replacement costs would be anomalously high. *See* SBC Comments at 27-28.¹⁶

Indeed, the similarities between the proposed approach and TELRIC today dwarf the differences, critical as those differences may be. The primary distinction is that the new approach would take more as given about the characteristics of the actual network than does the existing approach. In its current form, TELRIC already takes as given some features of that

¹⁶ MCI suggests that, in *Verizon v. FCC*, 535 U.S. 467 (2002), the Supreme Court “held that the Act’s language ‘places a heavy presumption against any method resembling’ the ‘actual’ network models proposed by the FCC in this *NPRM*.” MCI Comments at 16. That is a blatant misquotation. The Court said instead that, because section 252(d)(1) requires cost to be “determined without reference to a rate-of-return or other rate-based proceeding,” the “statutory language places a heavy presumption against any method resembling the traditional *embedded-cost-of-service model of ratesetting*.” *Verizon*, 535 U.S. at 512 (emphasis added). As discussed in SBC’s opening comments (at 33), the Commission’s proposal for the use of actual forward-looking costs does not remotely resemble an “embedded” or “historical” cost methodology.

network: the current locations of wire centers as well as its use of wireline rather than wireless technology. As the Commission has long maintained, holding some features of the “existing network” constant in the replacement cost inquiry is necessary to “encourag[e] new entrants to design and build networks of their own” and “enabl[e] state public utility commissions to implement TELRIC more expeditiously.”¹⁷ And the Commission has also long acknowledged that, in deciding how many such features to hold constant, it “might reasonably have drawn the line somewhere else within the structure of the network.”¹⁸

The Commission’s proposal here does no more than follow up on these observations by recalibrating TELRIC to retain its existing emphasis on forward-looking economic costs while freeing it of its current methodological self-contradictions as well as its reliance on ungrounded speculation. As Professors Aron and Rogerson explain:

We believe that the [forward looking economic cost] methodology we propose, which bases cost calculations on the ILEC’s current network design (as it will be modified over a reasonable future period for which the ILEC can reasonably plan network upgrades) and the ILEC’s currently achieved levels of efficiency, provides a reasonable approach to estimating ILECs’ true forward costs, while at the same time providing a relatively concrete standard that can be based more firmly on objectively verifiable data. We consider this approach to be sound and valid whether or not one acknowledges concerns about regulatory expropriation, because our proposed methodology addresses fundamental limitations on regulators’ ability to reliably identify and predict achievable efficiencies. Given the additional need to provide state regulators with an institution that allows them to credibly commit to reimbursing ILECs for their investment, we believe that this represents the best possible solution to a difficult problem.

Aron/Rogerson Dec. 2003 Paper § 6, at 44.

¹⁷ Reply Brief for Petitioners United States and the FCC, *Verizon Communications Inc. v. FCC*, 535 U.S. 467 (2002), 2001 WL 881216 at *5 (“FCC S. Ct. Reply Br.”).

¹⁸ *Id.*

There is no merit to the CLECs' suggestion that the major ILECs still maintain inefficient networks despite years of price cap regulation and the increasing intensity of facilities-based competition. As an initial matter, it is by no means clear that such efficiency considerations should play any dispositive role in the design of a methodology that is appropriately focused on an *ILEC's* forward-looking costs and thus places a socially beneficial premium on encouraging CLEC investment in those contexts where the ILEC is least efficient.¹⁹ In any event, there is no credible claim that ILECs are remotely inefficient when viewed from the appropriate perspective: as carriers of last resort that have constructed ubiquitous networks. As Professors Aron and Rogerson explain in their attached paper, there is no merit to the CLECs' various efforts to downplay the demonstrated effectiveness of price caps as a mechanism for promoting network-wide efficiency. *See* Aron/Rogerson Jan. 2004 Paper § 2.1.

Quite apart from price caps, moreover, the accelerating growth of facilities-based and intermodal competition—from CLECs, cable companies, VoIP providers, and wireless—places substantial competitive pressure on the ILECs and, for that reason alone, gives them overwhelming incentives to provide service on the most cost-effective basis. This is not even a

¹⁹ As Professors Aron and Rogerson observe:

[A] CLEC's decision to purchase a given element rather than build the facilities to produce this element itself is efficient if and only if the CLEC's net benefits from building, and incurring its forward-looking costs to do so, exceed its net benefits from purchasing the ILEC's facilities, taking into account the ILEC's full forward-looking cost of providing those facilities. It follows immediately that the CLEC will make an efficient make-or-buy decision so long as the ILEC charges prices that just cover its own forward-looking costs (including the cost of capital) of providing the UNE.

Id. § 2.3, at 14. Thus, if an ILEC performs a particular network task less efficiently than a new entrant could perform it, that is precisely the context in which CLECs should be given the greatest incentives to build facilities of their own.

subject of good faith debate; it is an irrefutable fact, as Wall Street persistently reminds investors. *See* SBC Comments at 26. To survive these competitive threats, the major ILECs have rooted out inefficiencies throughout their networks and have cut their workforces and expenses until there is now little or nothing left to cut. *See id.* The CLECs thus blink reality in claiming that ILECs remain somehow insulated from the competitive dynamics that induce efficiency throughout the rest of the economy.

There is likewise no substance to the CLECs' claims that amending TELRIC to take greater account of the actual network would somehow worsen, rather than alleviate, the profound indeterminacy that characterizes the application of TELRIC today. Grounding TELRIC more firmly in reality would not, as the CLECs claim, require abandoning cost models altogether in favor of plotting out the characteristics of the network "in atomistic detail." AT&T Comments at 5, 28, 58. There is no dispute that cost models will remain an important part of cost proceedings no matter how TELRIC is revised. The dispute concerns instead the appropriate *objective* of such models. Is the objective, as under today's form of TELRIC, to speculate about the characteristics of an entirely hypothetical network that has little in common with today's actual network? Or is the objective to extrapolate from representative data about the existing network to convey an accurate picture of an efficient network in the real world? The latter answer is not only more theoretically appropriate, for the reasons discussed, but also much predictable in application and much less susceptible to black-box decisionmaking. Indeed, cost models designed to represent characteristics of existing ILEC networks have a long pedigree, and they are highly feasible to implement. Palmer Decl. ¶¶ 18-37; *see also* Comments of the Mo. Pub. Serv. Comm'n, at 6 (Dec. 16, 2003) ("Mo. Pub. Serv. Comm'n Comments"); *Ex Parte*

Comments of the Fla. Pub. Serv. Comm'n, at 4-6 (Jan. 23, 2004) ("Fla. Pub. Serv. Comm'n Comments").

Finally, there is no merit to the CLECs' various arguments about the alleged cost-allocation and related issues that arise from the Commission's decision in the *Triennial Review Order* to exempt certain broadband-specific elements from section 251 unbundling obligations. To begin with, the basic choice presented in this proceeding—between taking less or more about the existing network as given in conducting a replacement cost analysis—is logically independent of the questions about how regulators should address UNE costs given that some elements need no longer be unbundled. For that reason, the Commission need not and should not delay deciding the first issue if it perceives the need to develop more of a record on the second.

In any event, as noted in Part III below, the CLECs vastly overstate the extent to which, if at all, the unbundling decisions in the *Triennial Review Order* warrant adjustments to loop rates or the adoption of new cost principles. Narrowband loop rates today include no recovery for the additional equipment required to provide broadband services over hybrid loops; loop studies *already* allocate joint and common costs among various outside plant facilities; and there is no sensible basis for altering basic cost allocation principles depending on which UNEs CLECs may or do choose to purchase. Finally, because ILECs have not yet deployed significant quantities of fiber-to-the-premises loops relative to the total number of access lines in their networks, and will not do so for several years, it is entirely premature to speculate about the various issues that will arise once they have done so. Indeed, those issues will require resolution by the Commission at the appropriate time no matter what its general UNE cost methodology may be at that point.

II. THE COMMISSION SHOULD DELINEATE FOR SPECIFIC INPUTS THE EFFECT OF ITS TENTATIVE DECISION TO MODEL REAL-WORLD CHARACTERISTICS OF ILEC NETWORKS.

A. Cost of Capital

If the Commission is committed to reforming TELRIC so that it more closely accounts for the costs the incumbent will bear in providing UNEs, it should ensure that the cost of capital input adequately accounts for the risks the incumbent faces and anticipates in that venture. A cost of capital that understates those risks would seriously understate the return the incumbent must earn in order to attract investment. The result would be not only to undercompensate the incumbent for the forward-looking costs it will bear in providing UNEs, but also to provide distorted economic information to the market and thus encourage inefficient reliance on UNEs rather than facilities investment. Of course, if the Commission does *not* reform TELRIC as it has proposed, and if it continues to base the cost inquiry on assumptions about hypercompetitive or perfectly contestable markets, as the CLECs advocate, analytical consistency would require the cost of capital to be enormous, for the reasons discussed in Part I above and in Part I of SBC's opening comments. As the Commission has recognized, using a cost of capital that is not consistent with the methodology underlying the selection of other investment inputs would produce skewed and economically irrelevant results, "reduc[ing] artificially the value of the incumbent LEC network and send[ing] improper pricing signals to competitors."²⁰

The only analytically sound solution is to base UNE inputs, including the cost of capital, on relevant real-world data. However, as SBC explained in its original comments, this is not as

²⁰ *Triennial Review Order* at 17397 ¶ 682; *see also NPRM* ¶ 84 (noting that the "importance of [the *Triennial Review Order*'s clarification regarding cost of capital] was to confirm that state commissions must use a consistent set of assumptions when they calculate the three components of rates (operating expenses, cost of capital, and depreciation expense).").

straightforward for the cost of capital as it is for other UNE data, because there is no real-world evidence concerning the cost of capital of a company that provides only UNEs at wholesale. *See* SBC Comments at 38; *see also* Comments of Verizon, at 68 (Dec. 16, 2003) (“Verizon Comments”). Thus, the challenge in estimating the proper cost of capital is to identify the correct empirical evidence and the correct model to use to determine a cost of capital that reasonably accounts for the level of risk that a UNE-only company would face.

The CLECs, of course, insist that a UNE-only company would somehow face little risk and that lenders would gladly extend substantial amounts of cheap credit to it without any concern about its viability or their ultimate return. *See, e.g.,* AT&T Comments at 89. This position seems particularly absurd in light of Merrill Lynch’s recent decision to downgrade SBC because of “high levels of competition,” “growing substitution trends,” and the “technology changes (VoIP) destabilizing the legacy voice business longer term,” combined with the “limited scope for favorable regulatory changes in 2004.”²¹ In short, the risks in the wireline industry, with respect to UNEs in particular, are very substantial. Both investors and lenders clearly would require a substantial return to fund a UNE-only company given the healthy state of intermodal competition and the uncertain and asymmetrical regulatory obligations to which a UNE-only company is subject. As shown below, the CLECs’ advocacy with respect to each component of the cost of capital—cost of equity, cost of debt, and capital structure—is inconsistent with this basic reality.²²

²¹ Merrill Lynch, SBC Communications Inc.: Lowering Opinion from Neutral to Sell (Jan. 9, 2004).

²² Allegiance proposes the use of UNE-specific costs of capital and argues that the costs of capital for “legacy network” UNEs should be especially low. Comments of Allegiance Telecom, Inc., et al., at 6 (Dec. 16, 2003) (“Allegiance Comments”). But this is nonsense on two fronts. First, determining UNE-specific costs of capital would only add further complexity to a process

1. Cost of Equity

The cost of equity, which is typically the largest component of a company's cost of capital, must reflect the relevant investment risks. The most significant of these risks, especially in the telecommunications industry today, is posed by actual and anticipated competition. While the market does not feature the "costless entry and exit" hypothesized by AT&T, *see* Declaration of Robert D. Willig on Behalf of AT&T ¶ 116 (Dec. 16, 2003) ("Willig (AT&T) Decl."), it is characterized by intense and increasing competition from all corners. The competition that is most significant to the provision of UNEs is intermodal competition, which is eroding wireline market share. As the comments before the Commission detail, cable telephony, wireless, and VoIP providers are mounting an increasing threat to the wireline market,²³ and all enable customers to bypass the ILEC's network entirely, thus rendering the provision of UNEs an increasingly unstable basis for sustaining a business. Facilities-based wireline rivals offer bypass opportunities as well and also make investing in a UNE-only company risky. In addition to

that is already exceedingly complicated due to the need to calculate the cost of capital for a fictional UNE-only company. Second, as described below, *all* UNE facilities are threatened by intensifying intermodal competition that permits users to bypass the wireline network entirely. And in any event, as discussed above, there is every indication that competition will and should continue to develop for network elements that remain subject to unbundling requirements.

²³ See SBC Comments at 39-41; Verizon Comments at 19-24. Recent examples are AT&T's announcement of a major VoIP initiative and Time Warner's agreements with MCI and Sprint to pursue "aggressive rollout" of residential phone service. See Andrew Backover, *AT&T to Add Internet Phone Service*, USA Today (Dec. 11, 2003), available at http://www.usatoday.com/money/industries/telecom/2003-12-11-att_x.htm; see also *Time Warner Cable Partners with MCI And Sprint For Nationwide Rollout Of Digital Phone* (Dec. 8, 2003), available at http://media.aoltimewarner.com/media/press_view.cfm?release_num=55253663. New estimates of cable telephony subscribers are as high as 17.4 million by 2008. J. Halpern et al., *U.S. Telecom & Cable: Faster Roll-out of Cable Telephony Means More Risk to RBOCs; Faster Growth for Cable*, Bernstein Research Call, at 1 (Dec. 17, 2003). As a result, analysts "now believe the cable telephony threat to the RBOCs is nearly 70% greater than we had previously expected." *Id.*

competitive risks, UNE companies also face specific regulatory risks: the constantly changing TELRIC pricing rules, the variable UNE obligations imposed by the Commission and applied in unpredictable ways by the states, and the requirement to provide UNEs on terms that the CLECs may cancel at any time with minimal notice. *See* SBC Comments at 41; *see also* Avera Reply Decl. ¶ 9.

Measuring the precise effect such risks have on the cost of equity requires the use of a model, because investors' expectations of future cash flows are not a directly observable phenomenon. There is relatively little debate about which models should be used to estimate the cost of capital—all parties that address the question propose the use of either the discounted cash flow ("DCF") model or the capital asset pricing model ("CAPM") or both.²⁴ However, as discussed below, features of both models complicate the use of either to measure the cost of equity accurately for an industry that, like the incumbents' wireline business, is in a period of significant restructuring and which has begun experiencing a decline. It is important, therefore, to use both these models in a manner—and with the appropriate inputs—that produces a cost of equity that makes sense as an empirical matter, taking these real world considerations into account.

The CLECs' proposals fail to do this. Instead, they use the cost of equity models in a manner specifically designed to produce costs of capital that are utterly inconsistent with a common sense appraisal of the risks that incumbents face in providing UNEs today. For example, AT&T proposes applying a three-stage DCF model, using the RBOC holding

²⁴ SBC submits that the most reliable cost of equity may be estimated by using *both* models; Verizon and BellSouth, in contrast, submit that *only* the DCF model presents an acceptable means of determining the cost of equity. *See* Verizon Comments at 73; Declaration of Randall S. Billingsley on Behalf of BellSouth ¶¶ 30-33 (Dec. 16, 2003).

companies' present growth rates for the first stage, followed by long-term expected growth rates for the economy overall.²⁵ This approach, however, does not produce a cost of equity estimate that is even remotely plausible. *See* Avera Reply Decl. ¶¶ 19-20. In fact, AT&T's recent implementation of this approach in the SBC California UNE proceeding produced a cost of equity of only 9.92 percent, contributing to an overall cost of capital proposal of 7.63 percent.²⁶

But it is beyond question that the investors and investment analysts alike today consider the incumbents to be extremely risky investments. As noted above, Merrill recently downgraded SBC to "sell," while a 2003 analyst report noted that "SBC Communications' core local telephone business continues to struggle amid a tough operating environment" and "to suffer the ill effects of wireless/broadband substitution, intense pricing pressure, and a sluggish economy."²⁷ Analysts have gone so far as to predict that incumbents are "doomed" by the potential for new technologies—such as wireless and VoIP over alternative broadband platforms—to bypass the wireline network completely.²⁸ Yet AT&T's analysis produces a cost of equity for a UNE-based company that is *lower* than the cost of equity AT&T proposed in

²⁵ See Declaration of Terry L. Murray on Behalf of AT&T ¶¶ 83-87 (Dec. 16, 2003) ("Murray (AT&T) Decl.").

²⁶ See Declaration of Terry L. Murray in Support of Joint Applicants' Rebuttal Comments, *Joint Application of AT&T Communications of California, Inc. (U 5002 C) and WorldCom, Inc. for the Commission to Reexamine the Recurring Costs and Prices of Unbundled Switching in its First Annual Review of Unbundled Network Element Costs Pursuant to Ordering Paragraph 11 of D.99-11-050*, et al., ¶¶ 103, 150 (Cal. Pub. Util. Comm'n Mar. 12, 2003).

²⁷ Value Line Investment Survey (July 4, 2003) at 737.

²⁸ See *ILECs 'Doomed' By Next-Generation Networks, Experts Say*, Communications Daily (Nov. 10, 2003); SBC Comments at 39.

1997,²⁹ at a time of much lower risk, before the recent explosion of these alternative technologies and the implosion of the telecommunications industry overall. Indeed, the cost of capital that results from AT&T's proposed cost of equity methodology is substantially lower than the default 11.25% cost of capital the FCC established back in 1996³⁰—thus suggesting the patently counterintuitive result that incumbents' cost of equity (and their risk) has *plummeted* as intermodal competitors have begun eroding their market shares.³¹

As Dr. Avera explains in the attached declaration, the DCF model, with inappropriate inputs, can produce illogical results such as AT&T's that entirely fail to reflect the expectations of investors in the capital markets.³² See Avera Reply Decl ¶ 18. Applications of the “constant growth” DCF model are typically based on near-term growth rate projections of securities analysts. Since the telecommunications industry is undergoing serious structural shifts, however, analysts' short-term projections will show minimal expected earnings growth or even negative growth. The DCF model, which is very sensitive to the growth trend input, therefore produces very low cost of equity estimates when the RBOC holding companies' current data is used. See

²⁹ See Direct Testimony of Bradford Cornell, *Review of Ameritech Ohio's Economic Costs for Interconnection, Unbundled Network Elements, and Reciprocal Compensation for Transport and Termination of Local Telecommunications Traffic*, Case No. 96-922-TP-UNC at 28 (OH PUC, filed Jan. 17, 1997) (proposing an 11.45% cost of equity).

³⁰ See *Local Competition Order* at 15856 ¶ 702.

³¹ Indeed, AT&T's claim that wireless and broadband services are even riskier than UNEs, see AT&T Comments at 89, would itself undermine AT&T's DCF calculation. The BOC holding companies have typically expanded their wireless and broadband investments in recent years and thus, even by AT&T's account, should have become *riskier*, not less risky, investments.

³² The DCF model estimates return by comparing the market price of a stock to investors' estimates of the net present value of the cash flows they expect to receive. Under certain conditions, this stream of cash flows can be reduced to the familiar “dividend yield plus growth” of the constant growth DCF model. See Avera Reply Decl. ¶¶ 16-17.

Avera Reply Decl. ¶ 22. But, to the extent investors continue to invest, their expectations obviously must be more positive over the long run than the short-term analyst forecasts of stagnant or negative growth. If investors truly expected no growth and no positive return, they would stop investing at all and the industry would disappear. The DCF model simply is not designed to accommodate the fact that, in an industry experiencing transition, short-term growth may diverge from investors' long-term expectations—reasonable or not—that the depressed growth trend will reverse itself. In such circumstances, adjustments must be made to the model inputs to ensure that the model can adequately measure investors' expectations in making investments in the company and the required cost of equity. *See id.*

Even AT&T recognizes the need to “fix” the shortcomings of the constant growth DCF model. AT&T's DCF model assumes that investors expect growth equal to investment analysts' five-year earnings growth projections, before trending to a growth rate equal to that of the economy as a whole. But artificially assuming a phase of growth equal to the rate of the overall economy does not cure the understatement of investors' required rate of return. *See Avera Reply Decl ¶ 20.* Indeed, AT&T presents no evidence that real-world investors expect the pattern of growth presumed by its DCF approach. In fact, it is entirely logical for investors to anticipate long-term rates of growth well in excess of the growth rate for the economy as a whole. *See id.* The only growth rates that matter in applying the DCF model are those that investors actually expect, and there is every indication that AT&T's DCF approach fails in estimating them. *See id.*

It is thus clear that, to use the DCF model to produce an empirically relevant cost of equity for the RBOC holding companies today, some adjustment to the assumptions or inputs used in the model must be made to reflect investors' expectations. In state UNE proceedings,

SBC has proposed using RBOC holding company data from 1999, just before the holding companies began experiencing—and analysts began predicting—a period of decline and a decrease in growth rates.³³ That approach reduces the distortion caused by the inclusion of more recent negative growth forecasts and produces a cost of equity in the neighborhood of 13 percent, a far more rational result than AT&T's. Indeed, given the degree to which competition and risk have increased since the FCC set its default 11.25% cost of capital, the cost of equity SBC calculates using the DCF (which produces an overall cost of capital of approximately 12 percent) is likely quite conservative.

Another approach, proposed in this proceeding by Verizon and BellSouth, is to use the current data of the S&P Industrials in place of the RBOC holding company data. The S&P 500 represents a group of robustly competitive companies, and because that proxy group is a larger and more diverse group than the RBOC holding companies, it can be used in the DCF without producing the skewed results associated with the RBOCs' exclusively downward growth trend.³⁴ In fact, SBC relies on this precise proxy group in calculating the market risk premium for use in the CAPM model. *See Avera Reply Decl.* ¶ 24. It is not critical that the Commission endorse one of these two approaches, but what *is* critical is that the Commission clarify that the model used to estimate a TELRIC cost of equity is valid only insofar as it produces rational figures that comport with the empirical evidence about competition and other risks. In other words, as with all other TELRIC inputs at issue in this proceeding, cost of capital modeling must be benchmarked against the real world.

³³ As one analyst has explained, "2000 was the year in which the telecommunications industry began its sharp decline." Elise A. Couper, John P. Hejkal, and Alexander L. Woolman, "Boom and Bust in Telecommunications," *Economic Quarterly* (Fall 2003) at 18.

³⁴ *See Verizon Comments at 73; Comments of BellSouth, at 32 (Dec. 16, 2003).*

For similar reasons, there is no merit to AT&T's suggestion that the cost of equity should be measured using the CAPM with historical data and a beta of 0.75. *See* AT&T Comments at 85. Using this approach, AT&T would again produce an absurdly low cost of equity for the UNE business. AT&T defends that outcome on two grounds: first, that the risk for UNE-based companies is lower than for wireless and broadband companies, and, second, that this makes sense because the only relevant risk investors factor into their investment decisions is so-called "systemic" risk—macroeconomic risk (such as larger economic trends) that cannot be balanced out by diversification. *See* AT&T Comments at 89. AT&T contends that such economic trends would affect wireline (and hence UNE) companies less than other companies. Neither point is correct.

AT&T does not, and could not, show that the provision of UNEs or basic service is less risky than wireless and broadband services. AT&T claims, for example, that the beta—a basic risk measurement of a company as compared to the market overall³⁵—has increased for the RBOCs, and Qwest in particular, from 1997 to the present as they have diversified from wireline alone to wireless and broadband offerings as well. *See* Declaration of Lee L. Selwyn on Behalf of AT&T ¶¶ 55-57 (Dec. 16, 2003) ("Selwyn (AT&T) Decl."). But that analysis is flawed. Comparing the beta of U S WEST in the early years right after the 1996 Act to the beta of Qwest, beginning in 2000, does not allow any meaningful isolation of the risks associated with the wireline versus the broadband business ventures of those companies. *See* Avera Reply Decl. ¶ 28. AT&T does not even try to segregate out the various macro-economic or company-specific

³⁵ The beta, an input in the CAPM, represents the tendency of a stock's price to follow changes in the market. Therefore, a stock that exactly tracks changes in the market will have a beta of 1.0, a stock that is more volatile than the market will have a beta of greater than 1.0 and a less volatile stock will have a beta lower than 1.0.

factors that likely account for the different betas the companies faced during those different periods. Indeed, U S WEST's merger with Qwest could have been a significant factor in its increasing risk, regardless of the underlying business ventures. *See id.*

Further, AT&T's effort to show that the increasing beta of the RBOCs is correlated with increasing broadband and wireless investment, *see* Selwyn Decl ¶¶ 55-57, ignores the more fundamental developments in the telecommunications industry that are far more likely to contribute to those rising betas. As competition develops in an environment marked by high fixed costs, rapidly changing technology, and regulatory uncertainty, the industry has become more volatile than the overall market. *See* Avera Reply Decl. ¶ 29. Indeed, a key cause of such turmoil, and hence the higher betas, almost certainly is the increase in competition.³⁶

Moreover, despite AT&T's inscrutable contrary argument, investors selecting individual investments within their portfolios obviously *do* worry not just about "macroeconomic" or "systemic" risk, but also about company-specific risks arising from competitive and other factors. *See* Avera Reply Decl. ¶ 26. That, indeed, is why investors take note, and demand higher returns, when analysts adjust the ratings of particular companies, as Merrill Lynch just did in dropping SBC to "sell." Indeed, even if customers could be confidently expected to go on ordering wireline service even in lean economic times, that does not mean that *investors* would consider incumbent wireline companies to be a good investment, particularly in a hyper-regulatory environment that continuously threatens to collapse their profit margins. In any event, customers *cannot* be expected to continue relying to the same degree on wireline service. As noted, the incumbents are experiencing line loss for the first time in American history, as

³⁶ While AT&T suggests that competition cannot be a factor because it consists solely of "the nominal presence of a few facilities-based competitors," Selwyn (AT&T) Decl. ¶ 58, that conveniently and irrationally ignores market realities. *See* Avera Reply Decl. ¶ 29.

accelerating numbers of their customers migrate to wireless service alone or to cable telephony (whether circuit-switched or VoIP).

It is possible, however, to employ the CAPM to produce a far more realistic cost of equity assessment than the one AT&T advocates. Properly executed, the CAPM is a forward-looking model that reflects investor expectations of future returns. It contains two components: the market risk premium and the beta. The market risk premium represents the additional return that investors demand if they are to forgo the relative safety of bonds and invest in riskier common stock. *See* Avera Reply Decl. ¶ 31. SBC calculates an appropriate risk premium for use in the CAPM by performing a constant growth DCF calculation, using the average S&P Industrials' growth rates as the proxy, and then subtracting out the realized rate of return on bonds. This approach is appropriate because it uses forward-looking data from a wide group of competitive companies to determine the overall market risk premium. SBC then applies a beta based on Value Line estimates for the RBOC holding companies, typically around 1.0, to this market risk premium—the same beta the Wireline Competition Bureau approved in the Verizon Virginia arbitration.³⁷ This calculation produces an overall risk premium, to which the average yield on long-term government bonds is added. Only this approach, which accounts for the recent developments that influence investor expectations and thus is appropriately forward looking, can ensure that the CAPM properly estimates the return investors will require on a prospective basis in light of the relevant risks. The Commission should provide guidance to the states to ensure that they take such a sensible approach. *See* Avera Reply Decl. ¶¶ 30-32.

³⁷ *See* Memorandum Opinion and Order, *Petition of WorldCom, Inc. Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia Inc., and for Expedited Arbitration*, CC Docket Nos. 00-218 & 00-251, DA 03-2738, ¶¶ 90-92 (rel. Aug. 29, 2003) (“*Virginia Arbitration Order*”).

2. Cost of Debt

While the cost of debt determination is less complex and typically less controversial than the cost of equity calculation, it is clear from the CLECs' advocacy here that Commission guidance is needed on this issue as well. As SBC explained in its comments, the correct approach is to examine the bond ratings of the RBOCs and then calculate the cost of debt based on recent yields of bonds with those ratings as reported by Moody's. *See* SBC Comments at 47. While all commenters generally agree on this approach, the CLECs insist that the proper measure of the cost of debt should include the low cost of the very short-term debt the ILECs issue. *See* AT&T Comments at 81-82. This proposal is illogical.

AT&T claims that, regardless of incumbent's current debt practices, an "efficient" carrier would use short-term debt as much as possible because it is less costly. *See* AT&T Comments at 82. But this clearly is wrong. If AT&T were correct, then there should be no carriers (or other companies in competitive industries) with substantial amounts of long term debt. But in fact, carriers fund their capital investments through long-term maturities that are constantly rolled over into additional long-term maturities, because this allows for efficient, predictable debt. Using debt with maturities as short as one year, as AT&T proposes, would require carriers constantly to refinance their debt—a process that involves unnecessary costs and inefficiencies. It also would subject the carrier to unpredictable rates that could fluctuate wildly. As SBC explained in its comments, although short-term debt rates are currently at historically low levels, there is no basis for assuming that they will stay there. *See* SBC Comments at 47. It would be irrational for a company to finance longer-term investments by repeatedly obtaining short-term debt, because those rates are so volatile. *See* Avera Reply Decl. ¶ 34. For this reason, the

capitalization ratios of SBC and other carriers that Value Line reports to investors do not include short-term debt.³⁸

3. Capital Structure

Only a market-based capital structure is appropriate for use in TELRIC studies. As SBC explained in its initial comments, only such a structure can measure the amount of debt versus equity that is currently invested in the relevant company, which investors incorporate into their investment decisions. *See* SBC Comments at 48.³⁹ The market-based approach to capital structure, using RBOC holding companies' data, typically yields a capital structure of 75-80% equity and 20-25% debt. *See* Avera Reply Decl. ¶ 36.

AT&T, however, contends that a proper "target capital structure" should have no more than 60% equity. *See* Murray (AT&T) Decl. ¶¶ 112, 116-17. But AT&T's "target" structure analysis is based in significant part on the inherently backward-looking book value capital structure that it uses in its state UNE rate advocacy. *See id.* ¶ 116.⁴⁰ Economic literature overwhelmingly rejects the notion that a "target" capital structure should be based on book value, and instead supports the use of a market value capital structure to determine the optimal, or "target," capital structure. As an article in *Financial Management* notes, "industry DE [debt-

³⁸ Likewise, AT&T's proposal to include the yield to maturity on specific bonds is inappropriate. *See* AT&T Comments at 81-82. Specific bonds have unique characteristics and are infrequently traded, and therefore do not always accurately reflect current capital market conditions. *See* Avera Reply Decl. ¶ 33.

³⁹ The market-based capital structure measures current relative amounts of debt and equity that investors have invested in the company. *See* SBC Comments at 48.

⁴⁰ *See also* Response Testimony of Terry L. Murray on behalf of AT&T Communications of Indiana, GP, and TCG Indianapolis and WorldCom, Inc., Cause No. 42393 (filed August 15, 2003) at 46 (acknowledging that AT&T's capital structure determination was based in part on book value calculations).

to-equity] norms are reasonable approximations of *optimal* DEs.”⁴¹ And as Ibbotson Associates has noted, “[f]inancial theory unambiguously states that market values are required to calculate the weights for a WACC [weighted average cost of capital] correctly.”⁴² This is because a market value-based capital structure reflects investors’ expectations of a company’s forward-looking capital structure. By contrast, a company’s book values simply reflect its historical accounting records and are often distorted by past developments such as corporate restructuring, downsizing, and mergers. *See* Avera Reply Decl. ¶ 37.

AT&T argues that its capital structure proposal is efficient and forward-looking because an efficient company would want to maximize its debt as opposed to its equity, since the former is less expensive. *See* AT&T Comments at 86. But AT&T’s proposed 40 percent debt would certainly *not* be the long-run structure of an efficient carrier, in part because the cost of debt is a function of the capital structure itself. In the real world, if a company with a market value capital structure of 80 percent equity and 20 percent debt shifted 20 percent of its equity to debt investments, bond rating companies would immediately downgrade that company’s bonds. *See* Avera Reply Decl. ¶ 39. Far from minimizing the carrier’s costs, AT&T’s proposed capital structure is simply unrealistic. The RBOC holding companies’ market capital structures present the most realistic and relevant target structure.

⁴¹ Robert M. Hull, “Leverage Ratios, Industry Norms, and Stock Price Reaction: An Empirical Investigation of Stock-for-Debt Transactions,” *Financial Management* (Summer 1999) (emphasis added).

⁴² Ibbotson Associates, *Industry Analysis Guide* (2003).

B. Depreciation

A forward-looking TELRIC cost study must use depreciation lives that account for the actual risks a carrier faces in the provision of telecommunications services in light of current and anticipated competition and technological change.⁴³ The only methodology proposed in this proceeding that would ensure this result is one that bases lives on Generally Accepted Accounting Principles (“GAAP”). As SBC, Verizon, and BellSouth have all explained, GAAP lives are designed specifically to account for those risks, and the loss of asset value that those risks threaten, and to do so in an up-to-date, forward-looking manner. *See* Vanston Reply Decl. ¶ 13.

The CLECs insist that the Commission should instruct the states to reject GAAP and to adopt regulatory depreciation lives prescribed by the Commission that are in some cases nearly ten years old. *See, e.g.,* AT&T Comments at 92-93; MCI Comments at 33-34. But using those outdated regulatory lives is not consistent with the Commission’s tentative inclination to reform TELRIC so that it better accounts for incumbents’ real-world network costs and attributes. The Commission’s prescribed lives are at most a historical snapshot that cannot account for the current and anticipated technological and competitive risks that dramatically affect the lives of the assets incumbents now use in providing UNEs. *See* Vanston Reply Decl. ¶¶ 14-15.

⁴³ Of course, as SBC explained in its initial comments, if the Commission does not revise TELRIC to anchor UNE rates more closely in the incumbent’s real-world experience, depreciation lives would have to be consistent with the more hypothetical version of TELRIC and its assumption of perfect-competition and immediate and ubiquitous technological replacement. *See* SBC Comments at 19. Under that scenario, GAAP lives would be the *starting place* for determining depreciation lives but then would have to be shortened greatly, because those lives do not account for the extreme, hypothetical level of competition assumed under CLEC approaches to current TELRIC methodology.

The FCC's regulatory lives are based on ranges that are a decade old and were last updated five years ago (and then only partially), and are by their very nature *backward*-looking in that they are based on outdated data. Those lives were originally established in the context of an entirely different regulatory regime (rate-of-return regulation), in which incumbents enjoyed a far greater likelihood of recovering their full costs. Further, the Commission's lives were fixed before the significant competitive and technological developments that characterize today's telecommunications landscape were even contemplated. *See id.*

For example, the Commission's lives were set prior to the emergence of the dramatic levels of intermodal and facilities-based intramodal competition that exist today; prior to the wide-scale deployment of packet switching and the explosion of the Internet; and long before substitutes for traditional wireline services such as VoIP began forcing a transition away from existing ILEC copper-based facilities and circuit switches.⁴⁴ The trends of growing intermodal competition and ILEC cost-cutting, which SBC detailed in its opening comments, have only continued. *See* SBC Comments at 38-42. One analyst recently predicted that, "[o]ver the long term . . . wireless displacement of wireline phones, losses of lines to reinvigorated facilities-based CLECs, growth of cable broadband, and DSL cannibalization of second lines combined with the proliferation of integrated voice/data bundles riding on packet switched access pipes," will exert increasing pressure on the RBOCs' wireline business.⁴⁵ In the wireless market specifically, analysts expect penetration in the United States to increase to 60.6% by the end of

⁴⁴ *See* SBC Comments at 52-53.

⁴⁵ V. Grover, *New Year's Resolution - Avoid the Bells*, Needham Equity Research Note at 1 (Dec. 29, 2003).

2005.⁴⁶ As for VoIP, it is expected that “[a]ll the hype in 2003 will become reality in 2004 . . . [and that] VoIP will capture 2.5 million access lines in 2004.”⁴⁷

In contrast, GAAP lives are specifically tailored to adapt to the rapid pace of technological and competitive change in the telecommunications industry. GAAP lives are reviewed periodically and used in a company’s annual financial reports. The use of GAAP lives therefore ensures a far more realistic and thus economically relevant estimate of the incumbent’s depreciation costs, which will help ensure that UNE rates provide accurate economic signals to the market and sufficient compensation to the incumbent.⁴⁸ See Vanston Reply Decl. ¶ 13.

The CLECs’ efforts to discredit GAAP lives as suspect and unreliable are premised solely on their argument that companies tend to understate depreciation lives. See, e.g., AT&T Comments at 95-96; MCI Comments at 34-35. There is no basis for that conjecture. The CLECs have shown no evidence that any company systematically understates the depreciable lives of its assets. Indeed, no company would have any plausible incentive to do so, because it would thereby artificially *increase* its reported expenses in the short term (because the

⁴⁶ L. Mutschler, et al., *US Wireless Services: The Year Ahead 2004*, Merrill Lynch, at 3 (Jan. 9, 2004).

⁴⁷ Morgan Keegan, *Telecom Update - Year End Review/2004 Outlook*, at 1 (Jan. 2, 2004).

⁴⁸ As SBC also explained in its initial comments, if the period between rate cases is shorter than an asset’s depreciable life, there is a high likelihood that the incumbent will not be fully compensated. See David M. Mandy & William W. Sharkey, “Dynamic Pricing and Investment from Static Proxy Models,” OSP Working Paper at 1 (Sept. 2003). In light of this problem, the Commission should adopt adjustments such as shortening GAAP lives as a simple means to ensure full recovery, and the Commission should be particularly careful *not* to allow the overstatement of lives. There is no merit to AT&T’s claim that use of equal life group depreciation ensures full recovery of costs, even if rates are reset at intervals shorter than the depreciation lives of the network assets. See AT&T Comments at 97-98. SBC’s cost models, like those of other ILECs, use only straight-line depreciation. To the extent these cost models are used to determine UNE rates, the equal life group issue raised by AT&T is therefore entirely irrelevant.

depreciation expense would have to be recovered over a shorter period) and thus reduce reported profits for that period. *See* SBC Comments at 54-55. In light of the recent depression of stock prices in the telecommunications industry, it is simply implausible that companies would purposefully understate their GAAP lives and reduce reported profits for the minimal benefit of potentially achieving higher UNE rates. Indeed, the consequences of failing to comply with this aspect of GAAP can be significant, since overstating depreciation expenses may lower stock prices and invite an array of civil and criminal penalties against the company and its officers.

There also is nothing to the CLECs' oft-repeated claim that GAAP is systematically biased to understate depreciation lives. MCI Comments at 35; AT&T Comments at 97. GAAP expressly requires that lives be based on "evenhanded, neutral, . . . [and] unbiased . . ." analysis.⁴⁹ If there were any doubt about this, the Accounting Standards Executive Committee, which establishes the guiding GAAP principles, specifically removed the "conservatism" principle relied upon by the CLECs ten years ago from the hierarchy of accounting principles.⁵⁰ In fact, Verizon has submitted a declaration from one of the members of that Committee that makes precisely this point. *See* Declaration of John M. Lacey on Behalf of Verizon ¶¶ 32-34 (Dec. 16, 2003).

The CLECs' attempt to show that the Commission's prescribed depreciation lives can somehow be defended as forward-looking fares no better. The CLECs try in various ways to

⁴⁹ FASB Statement of Financial Accounting Concepts No. 1, "Objectives of Financial Reporting by Business Enterprises," ¶ 33 (Nov. 1978).

⁵⁰ FASB Statement of Financial Accounting Concepts No. 2, "Qualitative Characteristics of Accounting Information," Figure 1 at 20, Glossary (May 1980). Although AT&T cites various sources for its position that GAAP lives are inappropriately influenced by conservatism, these sources failed to recognize the change made to GAAP principles that specifically eliminated the potential influence of conservatism on depreciation life estimates.

show that the FCC's original lives are, if anything, too *short*, pointing first to the ILECs' increasing depreciation reserve, and second to ILEC retirement records, both of which the CLECs contend show that the incumbents' telecommunications assets are lasting even *longer* than the FCC-prescribed lives anticipated. *See* AT&T Comments at 95-96; MCI Comments at 34. As a preliminary matter, the notion that the FCC's lives are too short is ludicrous, since the Commission itself shortened the range for digital switching when it revisited its ranges in 1999,⁵¹ and technological and competitive developments since 1999 can only shorten asset lives further. *See* Vanston Reply Decl. ¶ 16. In any event, neither the reserve nor incumbents' retirement records prove anything about whether the FCC's lives are forward-looking with respect to today's telecommunications assets.

The reserve reflects the amount of depreciation that has been taken with respect to the incumbents' assets, so that it grows as assets age; the reserve with respect to an asset returns to zero once that asset has been retired. *See* Vanston Reply Decl. ¶ 22. The CLECs contend that because the reserve has been increasing, this shows that over time, incumbents' assets are lasting *longer* before they are retired. *See* AT&T Comments at 95; MCI Comments at 34. But this is wrong for two reasons. First, it is entirely circular for the CLECs to rely on the depreciation reserve to validate the regulatory-prescribed lives in any way. Depreciation reserve reflects the amount of depreciation that has been taken with respect to an asset. The amount that the incumbents depreciate annually reflects the prescribed regulatory lives and the prescribed regulatory rates: all the reserve can possibly reflect is that the incumbents have depreciated their assets according to the FCC's prescriptions. *See* Vanston Reply Decl. ¶ 24. It is entirely unclear

⁵¹ *See* Report and Order and Memorandum Opinion and Order, *1998 Biennial Regulatory Review—Review of Depreciation Requirements for Incumbent Local Exchange Carriers*, 15 FCC Rcd 242, Appendix B (1999).

how that result could *validate* the FCC's prescriptions; it merely illustrates their application. In fact, the reserve *should* have been even higher. During a time of competition and technological change, expected asset lives should generally decrease, meaning that more economic value should be written off on an annual basis. *Id.* ¶ 25.

Second, it is natural for reserve levels to increase for a variety of reasons that have nothing to do with whether the FCC-prescribed lives are accurate. A carrier's reserve may increase because the carrier introduces expensive assets that have shorter lives and thus high annual depreciation expense. And the reserve will grow as well as the average age of *other*, preexisting telecommunications assets increases, until they are fully depreciated and retired. *See* Vanston Reply Decl. ¶ 26. These ongoing fluctuations preclude any meaningful conclusions about the relationship between the size of the depreciation reserve and the accuracy of the depreciation lives for the underlying assets.

The CLECs also assert that ILECs are retiring their assets at a slower rate than would be expected under the Commission's prescribed lives, thereby (they say) demonstrating that the Commission's prescribed lives are either appropriate or not long enough. *See* AT&T Comments at 95. But evidence concerning when older assets were retired has little to do with the forward-looking economic lives of current assets; historical data concerning actual retirement cannot predict the rate at which assets will be retired in the future. In any event, retirement records do not reflect all assets that have ceased to have economic value. For example, without recording an asset as "retired," an ILEC may need to keep a facility in the ground, even though the facility's operating costs exceed the associated revenues, in order to meet carrier-of-last-resort obligations. Or the costs of removing the asset on any individualized basis may exceed the sum

of the salvage value and any associated cost savings. Nor do retirements capture the loss of assets' economic value caused by decreased usage. *See* Vanston Reply Decl. ¶¶ 30-31.

In short, GAAP lives are superior to the Commission's prescribed lives for use in TELRIC cost studies, and the CLECs' attempts to breathe life into the Commission's prescribed lives are without merit.⁵²

⁵² The Commission should also reject MCI's argument that, if the Commission permits incumbents to use GAAP lives in measuring UNE costs, it must impose the GAAP rule prohibiting a company from including any asset removal costs ("negative net salvage value") in annual depreciation expenses. *See* MCI Comments at 36. The Commission has *already* considered whether the latter GAAP rule makes sense in the context of the accounting rules for regulated telecommunications services, and has properly concluded that it does not. *See* Order, *Financial Accounting Standards Board*, 17 FCC Rcd 25552, 25553 ¶ 4 (2002) (citing Report and Order, *Revision of the Uniform System of Accounts for Telephone Companies to Accommodate Generally Accepted Accounting Principles*, 50 F.R. 48408 (Nov. 25, 1985)). There is no reason for the Commission to revisit that conclusion here.

C. Loop Costs

1. Network Routing and Topography

The record amply supports the Commission's tentative conclusion that UNE pricing rules "should more closely account for the real-world attributes of the routing and topography of an incumbent's network in the development of forward-looking costs." *NPRM* ¶ 52. As SBC demonstrated in its comments, this emphasis on an ILEC's actual forward-looking costs is appropriate for several related reasons. First, to send accurate price signals, UNE rates must be based on the kind of network that a carrier of the ILEC's scope and scale would actually build over time to serve the actual customer locations that the ILEC serves, taking into account all of the factors that the ILEC must take into account when designing and building a network. The only realistic representation of such a network is the one the ILEC has built. Second, as discussed, departing from the real-world routing and topography of the incumbent's network in favor of the network a hypothetical, most efficient carrier would deploy today would require adjusting other inputs such as depreciation, cost of capital, and right-of-way costs, and these adjustments would inevitably produce dramatically higher UNE rates. Third, relying on the routing and topography of the incumbent's existing network will introduce much-needed predictability into TELRIC proceedings and alleviate the black box speculation that now characterizes such proceedings. *See generally* SBC Comments at 56-58.

The CLECs provide no basis for questioning these rationales for TELRIC reform as a general matter, as discussed in Part I, or specifically as applied to the question of network routing and topography, as discussed here. Contrary to the contention of certain CLECs, *see, e.g.*, Riolo (AT&T) Decl. ¶¶ 135-140; Declaration of Michael D. Pelcovits on Behalf of MCI, at 25 (Dec. 16, 2003) ("Pelcovits (MCI) Decl."), ILEC networks have evolved over many years to serve customers efficiently given the real-world constraints that ILECs (indeed, all carriers) must face.

For example, ILEC decisions about where to place serving area interfaces (“SAIs”) and feeder routes reflect a variety of real-world constraints,⁵³ the incremental construction of the network over time, and the relative trade-offs between the costs of distribution and feeder cables.⁵⁴ Of course, no carrier can predict demographic trends with certainty, so any carrier might have designed its network somewhat differently if it had always enjoyed the benefits of 20-20 foresight. But, as discussed in Part I, given the powerful incentives for ILECs to design their networks efficiently, that is no basis for disregarding existing network designs to ratchet down the forward-looking costs (or “value”) of an ILEC’s network.

⁵³ For example, SAIs and DLCs should be installed in locations that are easily accessible to technicians—i.e., where parking is available and traffic does not create an undue hazard. Right-of-way owners (whether public or private) do not always permit carriers to place SAIs and DLCs in otherwise optimal locations. Development patterns in the real world also affect the location and size of network facilities: Developers typically build houses in new subdivisions in relatively small groups (typically no more than several houses at a time), not by the thousand. Because there is no way to know how many homes developers eventually will build in a new subdivision or when all of those homes might be completed, it would be inefficient for an ILEC to size an SAI or remote terminal in a new development to serve thousands of homes that might never be built, as some CLECs have suggested. *See* Riolo (AT&T) Decl. ¶¶ 135-40; Pelcovits (MCI) Decl. at 25. Other real-world constraints that engineers must consider include municipal regulations about the placement of cables and network facilities, and the need to meet carrier-of-last-resort obligations and service quality standards.

⁵⁴ Distribution cable tends to be relatively more costly per working line than feeder cable for at least two reasons. First, because distribution cables typically serve much smaller groups of customers than feeder cables, the structure and placement costs associated with distribution cables are spread over a smaller number of working lines. Second, as discussed in more detail below, distribution cable is engineered with more spare capacity than feeder cable to allow ILECs to serve the inherently unpredictable demand for additional lines without constantly having to dispatch field technicians to rearrange or install cables. This increases the spare capacity costs associated with distribution cable (though, as explained below, it is far less expensive in the long run than not having sufficient spare distribution capacity). The relatively high costs of distribution cable make it more efficient to design a network with shorter distribution cable segments. That, in turn, requires a greater number of SAIs, DLCs, and feeder routes.

Nor is there any reason to be concerned about the reliability or verifiability of ILEC network routing data, as several CLECs contend.⁵⁵ The ILEC engineering databases from which this information is typically obtained must be accurate enough for engineers to operate and maintain the network.⁵⁶ If these databases are sufficient for those purposes, they are certainly accurate enough for cost modeling purposes. *See* Palmer Decl. ¶¶ 26-27. Indeed, ILEC data—which reflect actual network topography through the use of average loop lengths, actual structure types, and route-specific demand—are the *only* reliable source of information about network routing and topography on which to base a TELRIC cost model.⁵⁷ Even AT&T appears to concede that cost models should reflect as much of these data as possible.

While such data may not detail every single aspect of network routing, it is commonplace and entirely feasible for network engineers to model the design of existing ILEC networks based on key data points, as explained in the attached declaration of William Palmer. *See* Palmer Decl. ¶¶ 19-37. This approach does not require a “Herculean effort,” as Z-Tel alleges,⁵⁸ and is far

⁵⁵ *See, e.g.*, AT&T Comments at 56-57; Pelcovits (MCI) Decl. at 21-27; Allegiance Comments at 10.

⁵⁶ SBC’s loop cost model relies on SBC’s engineering databases and other sources of information to determine loop characteristics such as loop lengths, structure types, and cable sizes. SBC’s engineers use this data to monitor the network, plan network additions and upgrades, and perform numerous other tasks vital to the ongoing efficient operation of the network.

⁵⁷ MCI’s criticism that SBC’s LoopCAT model “do[es] not in fact reflect actual network topography” mischaracterizes SBC’s model. Pelcovits (MCI) Decl. at 21-22. SBC’s capacity costing approach uses average loop lengths and actual structure types, which inherently reflect actual network routing and topography. *See* Palmer Decl. ¶¶ 25-27. SBC also uses route-specific demand data to determine cable sizes. Thus, contrary to MCI’s contention, SBC’s cost study does reflect actual network topography.

⁵⁸ *Compare* Z-Tel Comments at 6-7 with Mo. Pub. Serv. Comm’n Comments at 6 and Fla. Pub. Serv. Comm’n Comments at 4-6.